OIPE

RAW SEQUENCE LISTING   DATE: 06/21/2002
PATENT APPLICATION: US/10/078,531   TIME: 07:18:03

Input Set : A:\Pharma18.app
Output Set: N:\CRF3\06212002\J078531.raw

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 3 <110> APPLICANT: MARTIN, DENIS
 4        RIOUX, STEPHANE
 5        BRODEUR, BERNARD R.
 6        HAMEL, JOSEE
 7        RHEAULT, PATRICK
 9 <120> TITLE OF INVENTION: STREPTOCOCCUS PYOGENES POLYPEPTIDES AND CORRESPONDING
10        DNA FRAGMENTS
12 <130> FILE REFERENCE: PHARMA-18
14 <140> CURRENT APPLICATION NUMBER: 10/078,531
15 <141> CURRENT FILING DATE: 2002-02-21
17 <150> PRIOR APPLICATION NUMBER: 60/269,840
18 <151> PRIOR FILING DATE: 2001-02-21
20 <160> NUMBER OF SEQ ID NOS: 14
22 <170> SOFTWARE: PatentIn Ver. 2.1
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25 <211> LENGTH: 3027
26 <212> TYPE: DNA
27 <213> ORGANISM: Streptococcus pyogenes
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32 tcgatttctg gcgctgacta cgcagaaagt agcggtaaaa gcaagttaaa gattaatgaa 180
33 acttctggcc ctgttgatga tacagtcact gacttatttt cggataaacg tactactcct 240
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35 gagaatacag aatcagaaaa gcagatcact tctggatctc aactagaaca atcaaaagag 360
36 tctctttctt taaataaaac agtgccatca acgtctaatt gggagatttg tgattttatt 420
37 actaagggga ataccctttgt tggtctttca aaatcaggtg ttgaaaagtt atctcaaact 480
38 gatcatctcg tattgcctag tcaagcagca gatggaactc aattgataca agtagctagt 540
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43 atttctgact atgcttttgc tcacctagct ttgaaacaga tcgatttgcc agataattta 840
44 aaagcgattg gagaattagc ttttttttgat aatcaaatta caggtaaact ttctttgcca 900
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53 caaaataaaa ctttacgtaa atatgatttg gaagaagtaa agcttccctc aactattcgg 1440
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54 aaaataggtg cttttgcttt tcaatctaat aacttgaaat cttttgaagc aagtgacgat 1500
55 ttagaagaga ttaaagaggg agcctttatg aataatcgta ttgaaacctt ggaattaaaa 1560
56 gataaattag ttactattgg tgatgcggct ttccatatta atcatattta tgccattgtt 1620
57 cttccagaat ctgtacaaga aataggggcgt tcagcatttc ggcaaaatgg tgcaaataat 1680
58 cttattttta tgggaagtaa ggttaagacc ttaggtgaga tggcattttt atcaaataga 1740
59 cttgaacatc tggatctttc tgagcaaaaa cagttaacag agattcctgt tcaagccttt 1800
60 tcagacaatg ccttgaaaga agtattatta ccagcatcac tgaaaacgat tcgagaagaa 1860
61 gccttcaaaa agaatcattt aaaacaactg gaagtggcat ctgccttgtc ccatattgct 1920
62 tttaatgctt tagatgataa tgatggtgat gaacaatttg ataataaagt ggttgttaaa 1980
63 acgcatcata attcctacgc actagcagat ggtgagcatt ttatcgttga tccagataag 2040
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78 caatcaaacc caaaaacgaa tagaggacga cactctgcaa tattgcctag gacagggtca 2940
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84 <211> LENGTH: 1008
85 <212> TYPE: PRT
86 <213> ORGANISM: Streptococcus pyogenes

88 <400> SEQUENCE: 2

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93              20                  25                  30
95 Leu Lys Gln Thr Gln Ala Ser Ser Ser Ile Ser Gly Ala Asp Tyr Ala
96          35                  40                  45
98 Glu Ser Ser Gly Lys Ser Lys Leu Lys Ile Asn Glu Thr Ser Gly Pro
99      50                  55                  60
101 Val Asp Asp Thr Val Thr Asp Leu Phe Ser Asp Lys Arg Thr Thr Pro
102 65                  70                  75                  80
104 Glu Lys Ile Lys Asp Asn Leu Ala Lys Gly Pro Arg Glu Gln Glu Leu
105              85                  90                  95
107 Lys Ala Val Thr Glu Asn Thr Glu Ser Glu Lys Gln Ile Thr Ser Gly
108              100                 105                 110
110 Ser Gln Leu Glu Gln Ser Lys Glu Ser Leu Ser Leu Asn Lys Thr Val
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120                    165                  170                  175
122 Gln Val Ala Ser Phe Ala Phe Thr Pro Asp Lys Lys Thr Ala Ile Ala
123                    180                  185                  190
125 Glu Tyr Thr Ser Arg Ala Gly Glu Asn Gly Glu Ile Ser Gln Leu Asp
126         195                  200                  205
128 Val Asp Gly Lys Glu Ile Ile Asn Glu Gly Glu Val Phe Asn Ser Tyr
129     210                  215                  220
131 Leu Leu Lys Lys Val Thr Ile Pro Thr Gly Tyr Lys His Ile Gly Gln
132 225                    230                  235                  240
134 Asp Ala Phe Val Asp Asn Lys Asn Ile Ala Glu Val Asn Leu Pro Glu
135                    245                  250                  255
137 Ser Leu Glu Thr Ile Ser Asp Tyr Ala Phe Ala His Leu Ala Leu Lys
138         260                  265                  270
140 Gln Ile Asp Leu Pro Asp Asn Leu Lys Ala Ile Gly Glu Leu Ala Phe
141     275                  280                  285
143 Phe Asp Asn Gln Ile Thr Gly Lys Leu Ser Leu Pro Arg Gln Leu Met
144     290                  295                  300
146 Arg Leu Ala Glu Arg Ala Phe Lys Ser Asn His Ile Lys Thr Ile Glu
147 305                    310                  315                  320
149 Phe Arg Gly Asn Ser Leu Lys Val Ile Gly Glu Ala Ser Phe Gln Asp
150                    325                  330                  335
152 Asn Asp Leu Ser Gln Leu Met Leu Pro Asp Gly Leu Glu Lys Ile Glu
153         340                  345                  350
155 Ser Glu Ala Phe Thr Gly Asn Pro Gly Asp Asp His Tyr Asn Asn Arg
156         355                  360                  365
158 Val Val Leu Trp Thr Lys Ser Gly Lys Asn Pro Ser Gly Leu Ala Thr
159     370                  375                  380
161 Glu Asn Thr Tyr Val Asn Pro Asp Lys Ser Leu Trp Gln Glu Ser Pro
162 385                    390                  395                  400
164 Glu Ile Asp Tyr Thr Lys Trp Leu Glu Glu Asp Phe Thr Tyr Gln Lys
165                    405                  410                  415
167 Asn Ser Val Thr Gly Phe Ser Asn Lys Gly Leu Gln Lys Val Lys Arg
168         420                  425                  430
170 Asn Lys Asn Leu Glu Ile Pro Lys Gln His Asn Gly Val Thr Ile Thr
171     435                  440                  445
173 Glu Ile Gly Asp Asn Ala Phe Arg Asn Val Asp Phe Gln Asn Lys Thr
174     450                  455                  460
176 Leu Arg Lys Tyr Asp Leu Glu Glu Val Lys Leu Pro Ser Thr Ile Arg
177 465                    470                  475                  480
179 Lys Ile Gly Ala Phe Ala Phe Gln Ser Asn Asn Leu Lys Ser Phe Glu
180                    485                  490                  495
182 Ala Ser Asp Asp Leu Glu Glu Ile Lys Glu Gly Ala Phe Met Asn Asn
183         500                  505                  510
185 Arg Ile Glu Thr Leu Glu Leu Lys Asp Lys Leu Val Thr Ile Gly Asp
186     515                    520                  525
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Input Set : A:\Pharma18.app
Output Set: N:\CRF3\06212002\J078531.raw

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192 545             550             555             560
194 Leu Ile Phe Met Gly Ser Lys Val Lys Thr Leu Gly Glu Met Ala Phe
195             565             570             575
197 Leu Ser Asn Arg Leu Glu His Leu Asp Leu Ser Glu Gln Lys Gln Leu
198             580             585             590
200 Thr Glu Ile Pro Val Gln Ala Phe Ser Asp Asn Ala Leu Lys Glu Val
201             595             600             605
203 Leu Leu Pro Ala Ser Leu Lys Thr Ile Arg Glu Glu Ala Phe Lys Lys
204     610             615             620
206 Asn His Leu Lys Gln Leu Glu Val Ala Ser Ala Leu Ser His Ile Ala
207 625             630             635             640
209 Phe Asn Ala Leu Asp Asp Asn Asp Gly Asp Glu Gln Phe Asp Asn Lys
210             645             650             655
212 Val Val Val Lys Thr His His Asn Ser Tyr Ala Leu Ala Asp Gly Glu
213             660             665             670
215 His Phe Ile Val Asp Pro Asp Lys Leu Ser Ser Thr Ile Val Asp Leu
216             675             680             685
218 Glu Lys Ile Leu Lys Leu Ile Glu Gly Leu Asp Tyr Ser Thr Leu Arg
219     690             695             700
221 Gln Thr Thr Gln Thr Gln Phe Arg Asp Met Thr Thr Ala Gly Lys Ala
222 705             710             715             720
224 Leu Leu Ser Lys Ser Asn Leu Arg Gln Gly Glu Lys Gln Lys Phe Leu
225             725             730             735
227 Gln Glu Ala Gln Phe Phe Leu Gly Arg Val Asp Leu Asp Lys Ala Ile
228             740             745             750
230 Ala Lys Ala Glu Lys Ala Leu Val Thr Lys Lys Ala Thr Lys Asn Gly
231             755             760             765
233 Gln Leu Leu Glu Arg Ser Ile Asn Lys Ala Val Leu Ala Tyr Asn Asn
234     770             775             780
236 Ser Ala Ile Lys Lys Ala Asn Val Lys Arg Leu Glu Lys Glu Leu Asp
237 785             790             795             800
239 Leu Leu Thr Gly Leu Val Glu Gly Lys Gly Pro Leu Ala Gln Ala Thr
240             805             810             815
242 Met Val Gln Gly Val Tyr Leu Leu Lys Thr Pro Leu Pro Leu Pro Glu
243             820             825             830
245 Tyr Tyr Ile Gly Leu Asn Val Tyr Phe Asp Lys Ser Gly Lys Leu Ile
246         835             840             845
248 Tyr Ala Leu Asp Met Ser Asp Thr Ile Gly Glu Gly Gln Lys Asp Ala
249     850             855             860
251 Tyr Gly Asn Pro Ile Leu Asn Val Asp Glu Asp Asn Glu Gly Tyr His
252 865             870             875             880
254 Ala Leu Ala Val Ala Thr Leu Ala Asp Tyr Glu Gly Leu Asp Ile Lys
255             885             890             895
257 Thr Ile Leu Asn Ser Lys Leu Ser Gln Leu Thr Ser Ile Arg Gln Val
258             900             905             910
260 Pro Thr Ala Ala Tyr His Arg Ala Gly Ile Phe Gln Ala Ile Gln Asn
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Input Set : A:\Pharma18.app
Output Set: N:\CRF3\06212002\J078531.raw

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261          915                    920                    925
263 Ala Ala Ala Glu Ala Glu Gln Leu Leu Pro Lys Pro Gly Thr His Ser
264     930                    935                    940
266 Glu Lys Ser Ser Ser Ser Glu Ser Ala Asn Ser Lys Asp Arg Gly Leu
267 945                    950                    955                    960
269 Gln Ser Asn Pro Lys Thr Asn Arg Gly Arg His Ser Ala Ile Leu Pro
270                    965                    970                    975
272 Arg Thr Gly Ser Lys Gly Ser Phe Val Tyr Gly Ile Leu Gly Tyr Thr
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276          995                    1000                   1005
279 <210> SEQ ID NO: 3
280 <211> LENGTH: 951
281 <212> TYPE: PRT
282 <213> ORGANISM: Streptococcus pyogenes
284 <400> SEQUENCE: 3
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291 Thr Thr Pro Glu Lys Ile Lys Asp Asn Leu Ala Lys Gly Pro Arg Glu
292          35                    40                    45
294 Gln Glu Leu Lys Ala Val Thr Glu Asn Thr Glu Ser Glu Lys Gln Ile
295     ·50                    55                    60
297 Thr Ser Gly Ser Gln Leu Glu Gln Ser Lys Glu Ser Leu Ser Leu Asn
298  65                    70                    75                    80
300 Lys Arg Val Pro Ser Thr Ser Asn Trp Glu Ile Cys Asp Phe Ile Thr
301                    85                    90                    95
303 Lys Gly Asn Thr Leu Val Gly Leu Ser Lys Ser Gly Val Glu Lys Leu
304                    100                    105                    110
306 Ser Gln Thr Asp His Leu Val Leu Pro Ser Gln Ala Ala Asp Gly Thr
307          115                    120                    125
309 Gln Leu Ile Gln Val Ala Ser Phe Ala Phe Thr Pro Asp Lys Lys Thr
310     130                    135                    140
312 Ala Ile Ala Glu Tyr Thr Ser Arg Ala Gly Glu Asn Gly Glu Ile Ser
313 145                    150                    155                    160
315 Gln Leu Asp Val Asp Gly Lys Glu Ile Ile Asn Glu Gly Glu Val Phe
316                    165                    170                    175
318 Asn Ser Tyr Leu Leu Lys Lys Val Thr Ile Pro Thr Gly Tyr Lys His
319                    180                    185                    190
321 Ile Gly Gln Asp Ala Phe Val Asp Asn Lys Asn Ile Ala Glu Val Asn
322          195                    200                    205
324 Leu Pro Glu Ser Leu Glu Thr Ile Ser Asp Tyr Ala Phe Ala His Leu
325     210                    215                    220
327 Ala Leu Lys Gln Ile Asp Leu Pro Asp Asn Leu Lys Ala Ile Gly Glu
328 225                    230                    235                    240
330 Leu Ala Phe Phe Asp Asn Gln Ile Thr Gly Lys Leu Ser Leu Pro Arg
331                    245                    250                    255
333 Gln Leu Met Arg Leu Ala Glu Arg Ala Phe Lys Ser Asn His Ile Lys
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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/078,531

DATE: 06/21/2002
TIME: 07:18:04

Input Set : **A:\Pharma18.app**
Output Set: **N:\CRF3\06212002\J078531.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:14; Xaa Pos. 3,6